

REMARKS

Claims 1-5 are pending in the application. Claim 1 is amended, and new proposed claim 6 is added. Applicant submits that entry of the proposed claim amendments will not be unduly burdensome, and consequently entry thereof is respectfully requested.

Reconsideration of the application is respectfully requested based on the following remarks.

I. REJECTION OF CLAIMS 1-3 AND 5 UNDER 35 U.S.C. § 102(e)

Claims 1-3 and 5 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0231588 (Mayer et al.). Withdrawal of the rejection is respectfully requested for at least the following reasons.

- i. Mayer et al. do not teach selectively forming a first insulation material in the trench to fill a lower part of the trench so as to reduce the aspect ratio of the trench, as recited in claim 1.*

Claim 1 is directed to a method for fabricating a trench isolation structure, and comprising forming a trench in a substrate. The trench is then filled with a first insulation material in a lower part of the trench ***so as to reduce an aspect ratio of the trench***. One non-limiting example of the trench after this process act is illustrated in Fig. 2 of applicant's specification. Mayer et al. do not teach this feature. Rather, as shown in Fig. 8A of the cited reference, Mayer et al. teach forming a liner oxide in a trench, wherein the liner oxide is formed in a substantially conformal manner in the bottom of the trench, and also on the sidewalls in a top portion of the trench. As appreciated by those skilled in the art, a conformal oxide formation process such as that taught by Mayer et al. causes the trench, after the liner oxide formation process, to have ***an increased aspect ratio***, rather than ***a decreased aspect ratio*** as claimed.

Clearly then, Mayer et al. fail to anticipate the invention of claim 1. Accordingly, withdrawal of the rejection is respectfully requested.

II. REJECTION OF CLAIM 4 UNDER 35 U.S.C. § 103(a)

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mayer et al. in view of U.S. Patent No. 6,387,764 (Curtis et al.). Withdrawal of this rejection is respectfully requested for at least the following reasons.

As set forth above, the primary reference fails to teach forming a first isolation material in the lower part of the trench so as to reduce the aspect ratio thereof. Curtis et al. fail to remedy the deficiencies in the primary reference. Therefore the combination of prior art fail to render obvious the invention of claim 4. Accordingly, withdrawal of the rejection is respectfully requested.

III. CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, REINP107US.

Respectfully submitted,
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